



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
10/032,328	12/31/2001	Ho-Woong Kang	P56619	4575				
7590 Robert E. Bushnell Suite 300 1522 K Street, N.W. Washington, DC 20005	11/14/2007		<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">LESPERANCE, JEAN E</td></tr></table>		EXAMINER		LESPERANCE, JEAN E	
EXAMINER								
LESPERANCE, JEAN E								
			<table border="1"><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2629</td><td></td></tr></table>	ART UNIT	PAPER NUMBER	2629		
ART UNIT	PAPER NUMBER							
2629								
			<table border="1"><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>11/14/2007</td><td>PAPER</td></tr></table>	MAIL DATE	DELIVERY MODE	11/14/2007	PAPER	
MAIL DATE	DELIVERY MODE							
11/14/2007	PAPER							

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/032,328

Applicant(s)

KANG, HO-WOONG

Examiner

Jean E. Lesperance

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-18, 20, 21, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-18, 20-21, and 24-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed September 7, 2007 is entered and claims 1-5 and 8-18, 20-21, and 24-25 are pending.
2. The indicated allowability of claims 19 and 22-25 is withdrawn in view of the newly discovered reference(s) to USPN 6,859,882 ("Fung"). Rejections based on the newly cited reference(s) follow.

Response to Arguments

3. Applicant's arguments filed September 7, 2007 have been fully considered but they are not persuasive. The applicant representative argued that the prior art, Nikijima et al., does not teach or fail to disclose a data interface coupled to said signal processor and connected between said computer and said display system. Examiner disagrees because the prior art, Nikijima et al., teaches Fig.1, wherein the mouse and the keyboard (104 and 105) are connected to the display device (103) through a USB (not shown) and the display device inherently includes a data interface and a signal processor connected to the USB and the data interface is used as an interface between the display device and the computer (101 or 102) to provide communication between the display device and the computer. The applicant representative argued that the prior art does not teach an input terminal coupled to said controller disposed to receive an input signal. Examiner disagrees with the applicant because the prior art, Nikijima et al., teaches Fig.1, wherein the mouse and the keyboard (104 and 105) are connected to the display device (103) through a USB (not shown), which is coupled to the processor or controller to receive an input signal when the user enters data from the keyboard or

Art Unit: 2629

mouse. Applicant's representative argued that the prior art, Nakajima, does not teach or fail to disclose at least the features of receiving a video signal and transmitting an output signal via an input and output (I/O) connector disposed within said display device; converting said input signal into a converted signal to be identified by a computer when said first mode is selected; and transmitting said converted signal via said input and output (I/O) connector to said computer for analysis. Examiner disagrees with the applicant because the prior art teaches Fig. 1, wherein the mouse and the keyboard (104 and 105) are connected to the display device (103) through a USB (not shown) wherein the display device receive the video signal and transmit it as an output signal (the user uses the mouse or keyboard to enter data into the computer which is converted into computer language and the display receives a video signal and transmits the display output which was entered through an input device by a user). In the case of the prior art, the computer has to find out which input devices, the keyboard or the mouse that has a higher authority enters the data and wherein the keyboard with its priority is considered to be first mode when accessing the computer and the mouse is considered to be the second mode when accessing the computer. The applicant argued that the prior art does not teach the claimed language of claim 17. Examiner disagrees because Boldt, one of the prior art, teaches said circuit means further includes shut down circuit means responsive to said input signal for producing a shut down signal when said input signal is at or below a predetermined value corresponding to a second predetermined percentage ratio of said movable member speed to said desired speed,

Art Unit: 2629

and means for stopping said drive means of said movable member in response to said shut down signal (13, lines 6-14). Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application #20010055029 by Nakajima et al. in view of USPN 6,859,882 ("Fung").

Regarding claim 1, Nakajima et al. teach a display system receiving a video signal from a computer and displaying a picture on a screen corresponding to said video signal (a control of a display in such a kind of display device is realized by using a video signal and vertical and horizontal sync signals from a host computer. (paragraph 0004), comprising:

an input terminal (the mouse (105) and the keyboard (104) are connected to the input terminal of the display device (103) from the host computer (102)) and ;

a signal processor converting an input signal applied to said input terminal into an output signal to be recognized by said computer (character signal processing Fig. 7 (705) where the character entered from the computer using the keyboard has to be converted into computer language like 1's and 0's for the computer to understand ;

a data interface coupled to said signal processor and connected between said computer and said display system (signal lines Fig.1 (106,107, and 108)), transfer data from the computer (101) to the display device (103);

and a controller transmitting said output signal to said computer via said signal processing part and said data interface (control unit Fig.7 (707)). The prior art teaches all the claimed limitations with the exception of providing said controller generating an activation control signal to said input and output terminal when said input signal represents an activation signal to initiate an increase in consumption of energy by an external apparatus coupled to said input and output terminal.

However, Fung teaches whether provided by the host computer (software RAID) or by a separate hardware storage subsystem controller (hardware RAID), or some hybrid of the two, the inventive structure and method provide procedures 110 for operating the storage devices, such as the RAID hard disc drives so as to reduce power or energy consumption and to increase effective disc drive life. These procedures may usually be stored in memory 112 (either host memory or controller memory depending upon the implementation) during execution by the processor (either the host processor or the controller processor (see Fig.6)).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the controller as taught by Fung in the system disclosed by Nakajima et al. because this would provide network architecture, computer system and/or server, circuit, device, apparatus, method, and computer program and control mechanism for managing power consumption and workload in computer system

and data and information servers.

Regarding claim 2, Nakajima et al. teach a memory Fig.7 (706); and said controller (control unit Fig.7 (707)) regulates said signal processor to convert said input signal into a control signal controlling said computer (character signal processing Fig. 7 (705) where the character entered from the computer using the keyboard has to be converted into computer language like 1's and 0's for the computer to understand), stores said control signal in said memory Fig.7 (706), and transmits said control signal from said memory to said computer via said data interface (signal lines Fig.1 (106,107, and 108)), transfer data from the computer (101) to the display device (103).

Regarding claim 3, Nakajima et al. teach an on-screen display generator (display unit (201) providing a variable video display for setting up a displaying condition, wherein said controller (control unit Fig.7 (707)) controls said on-screen display generator part to generate said video display in response to said input signal (the screen will change depending on the input signal send by the keyboard (104) or the mouse (105)).

Regarding claim 4, Nakajima et al. teach an input mode selector providing one of a computer input mode and a display system input mode for respectively recognizing said input signal as an output signal to be applied to said computer and as a control signal for controlling said display system (The video signal 108 from the host computer 101 and the video signal 111 from the host computer 102 are inputted to a video switching circuit 202 of the display device 103. Either one of them is selected and sent

to the display unit 201 and is displayed and outputted as video data (paragraph 0039); and said controller transmits said input signal to said computer via said signal processor and said data interface in the computer input mode, and said controller controls said display system in response to said input signal in the display system input mode (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)).

Regarding claim 5, Nakajima et al. teach said input terminal coupled to at least one of a mouse and a keyboard (the mouse (105) and the keyboard (104) are connected to the input terminal of the display device (103) from the host computer (102)).

Regarding claim 8, Nakajima et al. teach said input device further comprises at least one of a mouse and a keyboard (mouse 105 and keyboard 104).

Regarding claim 9, Nakajima et al. teach a display device (a control of a display in such a kind of display device is realized by using a video signal and vertical and horizontal sync signals from a host computer. (paragraph 0004), comprising:

a controller (controller unit Fig.7 (707);

an input terminal coupled to said controller disposed to receive an input signal (mouse 105 and keyboard 104 connected to the input terminal of the display unit (201) displayed a video signal 111 sent by the display device 103 from the host computer 102);

an input and output terminal coupled to said controller disposed to receive a video signal and transmit an output signal (the signal lines (106, 107, and 108) connected between the computer 101 and the display unit 103);

an input mode selector coupled to said controller selectively providing a computer input mode and a display device input mode (The video signal 108 from the host computer 101 and the video signal 111 from the host computer 102 are inputted to a video switching circuit 202 of the display device 103. Either one of them is selected and sent to the display unit 201 and is displayed and outputted as video data (paragraph 0039);

said controller transmitting said output signal in response to reception of said input signal during said computer input mode (input data from the key input device 104 is transmitted to the host computer 102 through a signal line 109 (paragraph 0034));
and

said controller controlling said video signal in response to reception of said input signal during said display device input mode (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)). The prior art teaches all the claimed limitations with the exception of providing said controller generating an activation control signal to said input and output terminal when said input signal represents an activation signal to initiate an increase in consumption of energy by an external apparatus coupled to said input and output terminal.

However, Fung teaches whether provided by the host computer (software RAID) or by a separate hardware storage subsystem controller (hardware RAID), or some hybrid of the two, the inventive structure and method provide procedures 110 for operating the storage devices, such as the RAID hard disc drives so as to reduce power or energy consumption and to increase effective disc drive life. These procedures may usually be stored in memory 112 (either host memory or controller memory depending upon the implementation) during execution by the processor (either the host processor or the controller processor (see Fig.6).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the controller as taught by Fung in the system disclosed by Nakajima et al. because this would provide network architecture, computer system and/or server, circuit, device, apparatus, method, and computer program and control mechanism for managing power consumption and workload in computer system and data and information servers.

Regarding claim 10, Nakajima et al. teach said controller converting said input signal into said output signal in accordance with said computer input mode (an input interface unit 1001 and an input interface unit 1002 converts the signal into a digital signal of an ordinary voltage in which 3.3V or 5V is set to the high level. A change-over switch 1003 switches an A input and a B input and outputs in accordance with a state of a switch input S (paragraph 0105)).

Regarding claim 11, Nakajima et al. teach a video display device (a control of a display in such a kind of display device is realized by using a video signal and vertical

Art Unit: 2629

and horizontal sync signals from a host computer (paragraph 0004)); and a computer Fig.1 (101) coupled to said input (mouse (105) and keyboard (104)) and output terminal (display unit (201), wherein said computer transmits said video signal to said video display device and receives said output signal from said video display device (input data from the key input device 104 is transmitted to the host computer 102 through a signal line 109 (paragraph 0034)).

Regarding claim 12, Nakajima et al. teach an input device (mouse (105) and keyboard (104)) disposed outside said display device (103), coupled to said input terminal (signal lines (106, 107, and 108), and providing said input signal to said display device (103) Fig.1.

Regarding claim 13, Nakajima et al. teach said input device comprises one of a mouse and a keyboard (Fig.1 (104 and 105).

Regarding claim 14, Nakajima et al. teach said input mode selector disposed outside said display device and coupled to said input terminal (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)).

Regarding claim 15, Nakajima et al. teach said input device comprises one of a mouse (105) and a keyboard (104) Fig.1.

Regarding claim 16, Nakajima et al. teach said controller responding to reception of said input signal by generating a shut down signal for consumption of power by an external apparatus coupled to said input and output terminal (the host computer (101)

Art Unit: 2629

inherently has a switch to turn on/off the power going the computer to conserve the power consumption and sometimes the controller can turn off the computer if it figures that there is no activity for a period of time).

Regarding claim 20, Nakajima et al. teach controlling a display device (a control of a display in such a kind of display device is realized by using a video signal and vertical and horizontal sync signals from a host computer (paragraph 0004)), with the steps comprised of:

receiving an input signal from a mouse or a keyboard at an input terminal (the input data from the mouse (105) and the keyboard (104) are transmitted to the host computer (101 or 102));

receiving a video signal (the display unit (201) receives a video signal from the host computer (101) and transmitting an output signal via an input and output (I/O) connector disposed within said display device (display unit (201) is displayed and outputted as video data;

alternatively selecting one of a first mode and a second mode (the video signal 108 from the host computer 101 and the video signal 111 from the host computer 102 are inputted to a video switching circuit 202 of the display device 103. Either one of them is selected and sent to the display unit 201 and is displayed and outputted as video data (paragraph 0039);

converting said input signal into a converted signal to be identified by a computer when said first mode is selected (the computer (101 or 102) inherently includes a converter (not shown) to convert the inputted data from the keyboard and the mouse

Art Unit: 2629

into computer language that can be identified by the computer and depending on which input device enters the data, selects or switches to its priority.

transmitting said converted signal via said input and output I/O connector to said converted analysis (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)); and

controlling a display of said display device in response to said input signal when said second mode is selected (a control mode is switched to the display control of the other computer of a priority lower than that of the relevant computer by a switching control input of the computer or the like. In this case, the output of the video signal is stopped by the switching operation of the switch and the control also advances to step S301 (paragraph 0061)); the video signal 114 and state signal 115 from the host 101 are supplied to a computer processing circuit 802. On the basis of the state signal 115, in the case where the state is changed from the absence to the presence of the video signal from the host 101 (for example, when a power source of the host 101 is turned on), the case where the video data which is supplied from the host 101 changes, or the case where the control signal showing the display switching request is generated and the key input by the keyboard 104, input by the mouse 105, or the like is detected, the control signal showing that the display switching is impossible is generated to the switching circuit 803 (paragraph 0092) corresponding to making a determination of whether said input signal is a shut-down signal. The prior art teaches all the claimed

limitations with the exception of providing applying a control signal to said input and output (I/O) connector to regulate energy consumption by an appliance coupled to said input and output (I/O) connector in dependence upon said determination.

However, Fung teaches whether provided by the host computer (software RAID) or by a separate hardware storage subsystem controller (hardware RAID), or some hybrid of the two, the inventive structure and method provide procedures 110 for operating the storage devices, such as the RAID hard disc drives so as to reduce power or energy consumption and to increase effective disc drive life. These procedures may usually be stored in memory 112 (either host memory or controller memory depending upon the implementation) during execution by the processor (either the host processor or the controller processor (see Fig.6).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the controller as taught by Fung in the system disclosed by Nakajima et al. because this would provide network architecture, computer system and/or server, circuit, device, apparatus, method, and computer program and control mechanism for managing power consumption and workload in computer system and data and information servers.

Regarding claim 21, Nakajima et al. teach converting said input signal into an output signal functionally controlling said computer coupled to said input and output I/O connector when said first mode is selected (an input interface unit 1001 and an input interface unit 1002 converts the signal into a digital signal of an ordinary voltage in which 3.3V or 5V is set to the high level. A change-over switch 1003 switches an A input

Art Unit: 2629

and a B input and outputs in accordance with a state of a switch input S (paragraph 0105)).

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application #20010055029 by Nakajima et al. in view of US patent # 4,251,759 ("Boldt").

Regarding claim 17, Nakajima et al. fail to teach said input signal is a shut down signal for shutting down to reduce consumption of power by an external apparatus coupled to said input and output terminal.

However, Boldt teaches said circuit means further includes shut down circuit means responsive to said input signal for producing a shut down signal when said input signal is at or below a predetermined value corresponding to a second predetermined percentage ratio of said movable member speed to said desired speed, and means for stopping said drive means of said movable member in response to said shut down signal (13, lines 6-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the shut down circuit as taught by Boldt in the display control disclosed by Nakajima et al. because this would prevent a malfunction of the display control system.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application #20010055029 by Nakajima et al. in view of US patent # 6,121,962 ("Hwang").

Regarding claim 18, Nakajima et al. fail to teach said controller responding to reception of said input signal representing a password signal by activating an external apparatus coupled to said input and output terminal.

However, Hwang teaches the input/output controller 7 is, in turn, connected to the system bus 1 for converting the mode of the computer system into a graphic off mode by outputting a graphic cut-off signal if the graphic off signal is input from the timer 6, checking a password if there is an input signal from a keyboard 71, a mouse 72 or an infrared port 74, and converting the mode of the computer system into a mode in which the user can see a screen of display unit 33; of the display or monitor 3 by stopping the output of the graphic cut-off signal if the password is correct. The second resistor R2 has one terminal connected to a node between the first resistor R1 in the display 3 and the graphic controller 32, and the other terminal connected as the input/output controller 7 (column 6, lines 19-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the password as taught by Hwang in the display control disclosed by Nakajima et al. because this would provide a computer system for controlling a screen display of a monitor in a power management mode (column 2, lines 66 and 67).

7. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application #20010055029 by Nakajima et al.

Regarding claim 24, Nakajima et al. teach controlling a display device (a control of a display in such a kind of display device is realized by using a video signal and

Art Unit: 2629

vertical and horizontal sync signals from a host computer (paragraph 0004)), with the steps comprised of:

receiving an input signal from a mouse or a keyboard at an input terminal (the input data from the mouse (105) and the keyboard (104) are transmitted to the host computer (101 or 102));

receiving a video signal (the display unit (201) receives a video signal from the host computer (101) and transmitting an output signal via an input and output (I/O) connector disposed within said display device (display unit (201) is displayed and outputted as video data;

alternatively selecting one of a first mode and a second mode (the video signal 108 from the host computer 101 and the video signal 111 from the host computer 102 are inputted to a video switching circuit 202 of the display device 103. Either one of them is selected and sent to the display unit 201 and is displayed and outputted as video data (paragraph 0039);

converting said input signal into a converted signal to be identified by a computer when said first mode is selected (the computer (101 or 102) inherently includes a converter (not shown) to convert the inputted data from the keyboard and the mouse into computer language that can be identified by the computer and depending on which input device enters the data, selects or switches to its priority.

transmitting said converted signal via said input and output I/O connector to said converted analysis (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206,

Art Unit: 2629

thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)); and

controlling a display of said display device in response to said input signal when said second mode is selected (a control mode is switched to the display control of the other computer of a priority lower than that of the relevant computer by a switching control input of the computer or the like. In this case, the output of the video signal is stopped by the switching operation of the switch and the control also advances to step S301 (paragraph 0061)); the video signal 114 and state signal 115 from the host 101 are supplied to a computer processing circuit 802. On the basis of the state signal 115, in the case where the state is changed from the absence to the presence of the video signal from the host 101 (for example, when a power source of the host 101 is turned on), the case where the video data which is supplied from the host 101 changes, or the case where the control signal showing the display switching request is generated and the key input by the keyboard 104, input by the mouse 105, or the like is detected, the control signal showing that the display switching is impossible is generated to the switching circuit 803 (paragraph 0092) corresponding to making a determination of whether said input signal is a shut-down signal. The prior art does not specifically teach making a determination and generating to I/O connector an activation control signal for activating an external apparatus. However, the prior art teaches a microcomputer 401 connected to a video signal 108 from the host computer 101, wherein the microcomputer can detect any signal coming in and out and generating the proper signal to an external apparatus. Thus, it would have been obvious to a person of

Art Unit: 2629

ordinary skill in the art at the time the invention was made to modify a microcomputer 401 connected to a video signal 108 from the host computer 101 to obtain making a determination and generating to I/O connector an activation control signal for activating an external apparatus because this would improve the switching displays.

Regarding claim 25, Nakajima et al. teach controlling a display device (a control of a display in such a kind of display device is realized by using a video signal and vertical and horizontal sync signals from a host computer (paragraph 0004)), with the steps comprised of:

receiving an input signal from a mouse or a keyboard at an input terminal (the input data from the mouse (105) and the keyboard (104) are transmitted to the host computer (101 or 102));

receiving a video signal (the display unit (201) receives a video signal from the host computer (101) and transmitting an output signal via an input and output (I/O) connector disposed within said display device (display unit (201) is displayed and outputted as video data;

alternatively selecting one of a first mode and a second mode (the video signal 108 from the host computer 101 and the video signal 111 from the host computer 102 are inputted to a video switching circuit 202 of the display device 103. Either one of them is selected and sent to the display unit 201 and is displayed and outputted as video data (paragraph 0039);

converting said input signal into a converted signal to be identified by a computer when said first mode is selected (the computer (101 or 102) inherently includes a

Art Unit: 2629

converter (not shown) to convert the inputted data from the keyboard and the mouse into computer language that can be identified by the computer and depending on which input device enters the data, selects or switches to its priority.

transmitting said converted signal via said input and output I/O connector to said converted analysis (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)); and

controlling a display of said display device in response to said input signal when said second mode is selected (a control mode is switched to the display control of the other computer of a priority lower than that of the relevant computer by a switching control input of the computer or the like. In this case, the output of the video signal is stopped by the switching operation of the switch and the control also advances to step S301 (paragraph 0061)); the video signal 114 and state signal 115 from the host 101 are supplied to a computer processing circuit 802. On the basis of the state signal 115, in the case where the state is changed from the absence to the presence of the video signal from the host 101 (for example, when a power source of the host 101 is turned on), the case where the video data which is supplied from the host 101 changes, or the case where the control signal showing the display switching request is generated and the key input by the keyboard 104, input by the mouse 105, or the like is detected, the control signal showing that the display switching is impossible is generated to the switching circuit 803 (paragraph 0092) corresponding to making a determination of

Art Unit: 2629

whether said input signal is a shut-down signal. The prior art does not specifically teach making a determination and generating to I/O connector an activation control signal for activating an external apparatus. However, the prior art teaches a microcomputer 401 connected to a video signal 108 from the host computer 101, wherein the microcomputer can detect any signal coming in and out and generating the proper signal to an external apparatus. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify a microcomputer 401 connected to a video signal 108 from the host computer 101 to obtain making a determination and generating to I/O connector an activation control signal for activating an external apparatus because this would improve the switching displays.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (571) 272-7692. The examiner can normally be reached on from Monday to Friday between 10:00AM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C. 20231

or faxed to:

(571) 273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park 11, 2121 Crystal drive,

Application/Control Number: 10/032,328

Page 21

Art Unit: 2629

Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jean Lesperance


Date 11/7/2007

Art Unit 2629



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600